

REMARKS

The Examiner's action mailed October 19, 2005 has been given careful consideration by the applicants, who respectfully request reconsideration of the application. Independent claims 1, 11, 23, 34, and 46 have been amended, and claims 1-56 remain in the application.

The Office Action

The Examiner rejected claims 1, 3-5, 10-11, 13-17, 22-23, 25-26, 27-28, 33-34, 36-40, 45-46, 48-51 and 56 under 35 U.S.C. § 102(b) as being anticipated by US Patent 5,396,543 to Beeson, Jr., et al.

The Examiner rejected claims 2, 6-9, 12, 18-21, 24, 29-32, 35, 41-44, 47, and 52-55 under 35 U.S.C. § 103(a) as being unpatentable over US Patent 5,396,543 to Beeson, Jr., et al.

Cited Prior Art

Beeson, Jr., et al. (Beeson) describes an apparatus and method for implementing signaling networks for mobile radio systems (cellular phone systems). Beeson adds a data switch (wireless global switching module) that functions as a hub for all signaling connections. This data switch logically terminates all of the SS7 signaling links between the various pieces of network equipment that enable a cellular phone network to function (Beeson, Col. 2, lines 36-46). The SS7 signaling network is an out-of-band network, meaning that "the signaling information is communicated over channels separate from the channels carrying actual voice or data communications between the customers being connected" (Beeson, Col. 2, lines 6-10). The SS7 network is a data network used for setting up call paths for bearer (voice) channels on other pieces of equipment. SS7 is its own protocol that is different from bearer (voice) channels and is not suitable for bearer (voice) channels (see Beeson, Fig. 3, and Col. 5, line 32 through Col. 6, line 16). The SS7 network is a data network for SS7 signaling data only, and not voice.

The 35 U.S.C. § 102(b) rejections

The Examiner rejected claims 1, 3-5, 10-11, 13-17, 22-23, 25-26, 27-28, 33-34, 36-40, 45-46, 48-51 and 56 under 35 U.S.C. § 102(b) as being anticipated by US Patent 5,396,543 to Beeson, Jr., et al. However, as detailed below, these claims are

not anticipated as suggested.

The Examiner cites to Beeson as teaching a method for maintaining call control at a Gateway Mobile Switching Center (MSC). However, Applicant defines the terms Gateway MSC and Serving MSC as having functionality that is patentably distinct from a normal MSC. In applicant's disclosure and claims, the MSC associated with the roaming mobile station is called the Serving MSC, and a different MSC, called a Gateway MSC, actually maintains call control for the roaming mobile station. Applicant's disclosure sets forth the methods and structures to maintain call control by a Gateway MSC of a roaming mobile station served by a Serving MSC, and is distinct from the normal call rerouting performed by the prior art "Home" and remote MSCs. See applicant's disclosure: Background of the Invention, Summary of the Invention, and Detailed Description of the Invention.

In the prior art in general, a roaming mobile station wirelessly communicates with a nearby base station. The base station is associated with an MSC that maintains call control for the roaming mobile station for both inbound and outbound calls. For calls being placed to the roaming mobile station, Beeson actually teaches the prior art method of rerouting call control by a normal "Home" MSC, and not maintaining call control by a Gateway MSC as applicant defines that term in the disclosure. Beeson teaches that when a call comes into the "Home" MSC and the associated mobile station is roaming outside of the range of that "Home" MSC, then the "Home" MSC "reroutes the call to the MSC that serves the mobile unit." (Beeson Col. 19, lines 11-14, 22-25). This "rerouting" is not the same as maintaining call control, as in applicant's disclosure, because the "Home" MSC passes call control to the other MSC when it reroutes the call to that MSC. It does not maintain the call control as in applicant's disclosure.

Similarly, for calls originating from the mobile station, Beeson does not teach applicant's disclosed method of transferring call control back to the Gateway MSC and thereafter retaining call control at the Gateway MSC. In the prior art in general, the MSC currently associated with the roaming mobile station handles call control for calls placed by roaming mobile stations, and does not pass control back to a single Gateway MSC. Beeson follows the prior art for these outbound calls as well. See Beeson, Col. 11, lines 29-40 describing how the call control for a moving mobile station is passed from one WSM [Wireless Service Module – part of an MSC] to another, inferring that call control is not retained at one point, as it would be in

applicant's disclosed Gateway MSC. See also Beeson, Figures 9-13 and accompanying text starting at Col. 14, line 15, showing only a single MSC and not separate Gateway and Serving MSCs. Beeson, therefore, does not teach a Serving MSC that passes call control to the Gateway MSC, nor does Beeson teach the Gateway MSC retaining call control in these circumstances.

Examiner also indicates that Beeson teaches "utilizing a packet network for bearer traffic transport". However, as described in the Cited Prior Art section above, Beeson does not teach bearer traffic transport using a packet network. Beeson teaches adding a wireless global switching module to the prior art SS7 network architectures. SS7 networks are specialized data networks with specific protocol stacks for handling SS7 call setup and tear-down messaging between network elements. SS7 networks are not typically suitable for, or capable of, bearer traffic transport, but are only for signaling messages.

Beeson does not show or fairly suggest a Gateway MSC that is capable of maintaining call control of a roaming mobile unit through a Serving MSC by using a packet network for bearer traffic transport, as disclosed and claimed in the present application. Independent claims 1, 11, 23, 34 and 46 clearly recite this maintenance of call control by the gateway MSC (or an associated processor). For example, these claims recite functions of the gateway MSC to maintain control such as providing a data link connection. For at least these reasons, these independent claims and all claims dependent thereon are distinct. Applicant kindly requests reconsideration of the claims in light of the above argument.

The 35 U.S.C. § 103 rejections

The Examiner rejected claims 2, 6-9, 12, 18-21, 24, 29-32, 35, 41-44, 47, and 52-55 under 35 U.S.C. § 103(a) as being unpatentable over US Patent 5,396,543 to Beeson, Jr., et al. However, as detailed below, these claims are not rendered obvious as suggested.

First, these claims all depend from claims submitted to be allowable. Therefore, these claims are likewise submitted to be allowable.

Second, the claims are non-obvious in light of Beeson. As applicant discloses, it can be advantageous to designate a different Gateway MSC to maintain call control for a roaming mobile station. Applicant asserts that using a Gateway MSC facilitates implementing advanced calling features such as call waiting, call

forwarding on busy, and three-way calling. In applicant's disclosure, advanced features only have to be implemented on the Gateway MSC, which can be located at a central location instead of every MSC throughout the network. The advanced calling features do not have to be implemented at all on the Serving MSC from which a roaming mobile station could originate or receive a call. This is advantageous because serving MSCs may not have compatible equipment for implementing all of the advanced calling features. Also, Serving MSCs may be owned and operated by a third party, which would require the original service provider to pay for additional circuit switch network lines or trunks to implement some advance features, such as three-way calling. These advantages are not found or suggested in the cited prior art.

Applicant's disclosure allows a Gateway MSC to maintain call control functionality on a Serving MSC to facilitate the implementation of advance calling features. Applicant's disclosure presents patentable advantages over the prior art that are both novel and non-obvious. Applicant kindly requests reconsideration of the claims in light of the above argument.

CONCLUSION

For the reasons detailed above, it is respectfully submitted all claims remaining in the application (Claims 1-56) are now in condition for allowance. The foregoing comments do not require unnecessary additional search or examination.

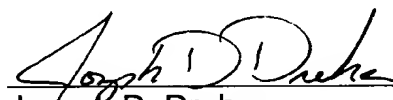
In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to telephone Joseph D. Dreher, at (216) 861-5582.

Respectfully submitted,

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February 21, 2006

Date

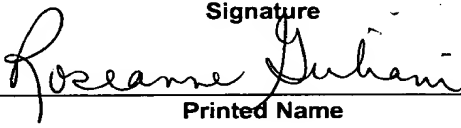


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